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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,970	10/22/2001	Susumu Yagi	05636.0039	8554

7590 11/15/2002
Finnegan, Henderson, Farabow,
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Washington, DC 20005-3315

EXAMINER

JONES, JUDSON

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 11/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,970

Applicant(s)

YAGI, SUSUMU

Examiner

Judson H. Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4 and 6 is/are rejected.
- 7) ☒ Claim(s) 2 and 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. See page 12 lines 18-23 of the instant application. Applicant is required to amend the disclosure to include any material incorporated by reference that is not in the instant application. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

Claim Rejections - 35 USC § 112

Claim 1 recites the limitation "every predetermined driving cycles" in line 10. There is insufficient antecedent basis for this limitation in the claim. There is no language in the claim about predetermining driving cycles. Lines 3 and 4 state the electromagnet vibrates at a predetermined frequency, not at several predetermined frequencies. Lines 7 and 8 have the language "to cause a predetermined driving," which also implies that only one driving process has been predetermined. Also in line 3 an article has been left out. This should read "of which (a or the) magnetic field vibrates." Also line 9 lacks parallelism. This should read "every predetermined driving cycle" or "all of the predetermined driving cycles."

Claim 3 and claim 4 also recite the limitation "every predetermined driving cycles" in lines 25 and 8, respectively. There is insufficient antecedent basis for this limitation in the claim and the phrase also lacks parallelism.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagi et al. 5,472,079 (of record) in view of Yagi 5,910,698 (of record) and Göktürk et al. 6,133,701. Yagi '079 discloses a method of controlling a parts feeder using an electromagnet but does not disclose idling the driving of the electromagnet to obtain a signal from the coil based on electromagnetic induction during a period of idling. However Yagi '698 teaches idling the drive of a vibration unit in order to obtain information to be used in controlling the drive as described in column 4 lines 28-37 and column 5 lines 27-35. While Yagi '698 is obtaining information to be used in controlling a piezoelectric vibrator, a person of ordinary skill in the art would have known that the technique is usable for other types of vibrators as well. Since Yagi et al. '079 and Yagi '698 are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized the technique of idling the vibrator in order to obtain information about the operating parameters of the vibrator and thus to have omitted a sensor for sensing a mechanical vibration in the device of Yagi et al. '079. Göktürk et al. teaches in column 2 column 28-36 that omitting a position sensor is desirable and

teaches in column 6 lines 13-32 what information needs to be obtained to control the vibrator. Göktürk et al. uses a detection coil 7 that detects an induced electromotive force in the stator coil 1. The method of Göktürk et al. meets the language of claim 1 because detection coil 7 obtains a signal from the electromagnet coil 1 by its induction as shown in figures 9 and 10 where elements R, E and L represent the linear actuator as a resistance, a counter electromotive force and an inductance. See column 3 lines 61-67. See also column 1 lines 11-14 where Göktürk et al. explains that the stator in the vibrator consists of an electromagnet. Since Göktürk et al. and Yagi et al. '079 as modified by Yagi '698 are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a signal obtained from a coil of the electromagnet by its electromagnetic induction in order to control the vibrator without the need for a vibration detector or a position detector, and thus reducing the size and cost of the vibration device.

In regard to claim 6, Yagi '698 does not disclose how long the idling period needs to be. However according to *In re Aller*, 105 USPQ 233 (CCPA 1955), "More particularly where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." Therefore Applicant's claimed optimum range of one or 1.5 cycles is given no patentable weight.

Allowable Subject Matter

Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims provided the 112 objections to the claims are overcome.

Art Unit: 2834

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or teach controlling vibration based on the phase difference between a waveform of the obtained signal and the waveform of the driving signal as recited in claim 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ *JHJ*
November 13, 2002

Judson H Jones
AU 2834